Amendments to the Claims:

1.   (canceled)

2.   (canceled)

3.   (canceled)

4.   (canceled)

5.   (canceled)

6.   (currently amended) A system for transmitting three dimensional (x, y, z axis) digital source images over a communication network, comprising:

a storage device for storing three dimensional digital source images;

a client computer coupled to the communication network, said client computer operative to generate and transmit to a server computer a request for interaction with the three dimensional source image stored on said image storage device, said request for interaction comprising an ordered request list specifying data blocks for progressive rendering of a given region of interest (ROI) within said three dimensional source image; and

said server computer coupled to the communication network and said image storage device, the server computer comprising means for preprocessing said three dimensional source image through a three dimensional wavelet transform wherein resultant three dimensional subband coefficient data comprises interslice correlation information, receiving said ordered request list from the client computer and progressively transmitting to said client computer three dimensional subband coefficient data blocks corresponding to said given region of interest in accordance with said ordered request list.

7.   (canceled)

8.   (canceled)

9.   (canceled)

10.   (previously amended) The system according to claim 6, wherein:

the request generated by the client computer specifies a resolution; and

the server computer provides a number of three dimensional data blocks corresponding to
said resolution.

11.   (canceled)

12.   (canceled)

13.   (canceled)

14.   (canceled)

15.   (canceled)

16.   (currently amended) A method for transmitting a sequence of digital source images as a
three dimensional image from a server computer to a client computer over a communication
network, said method comprising the steps of:

storing a sequence of digital source images on a storage device;

a client computer coupled to said communication network generating and transmitting to
a server computer a request for interaction with an image sequence stored on said
storage device, said request for interaction comprising an ordered request list
specifying data blocks for progressive rendering of a given region of interest
(ROI) within said image sequence; and

said server computer coupled to said communication network and said image storage
device performing two dimensional subband transform decompositions in x-axis
and y-axis directions on each image within said sequence to yield a two-
dimensionally transform-decomposed digital image;

said server computer performing a one dimensional subband transform decomposition in
a z-axis direction on a portion of said two-dimensionally transform-decomposed
digital image to generate three dimensional subband coefficient data comprising
inter-image correlation information; and

said server computer progressively transmitting to said client computer three dimensional subband coefficient data blocks corresponding to said given region of interest in accordance with said ordered request list.

17. (canceled)

18. (canceled)

19. (canceled)

20. (previously amended) The method according to claim 16, further comprising the steps of: including in the request generated by the client computer a specified resolution; and providing one or more three dimensional data blocks from the server computer that correspond to said resolution.

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (currently amended) A server for progressive streaming of sequences of digital source images as a three dimensional image to a client over a communications network, comprising:

an image storage device for storing a sequence of digital source images;

a memory cache;

a processor in communication with said image storage device, said processor comprising means for:

preprocessing the image sequence through a three dimensional forward wavelet transform to yield three dimensional wavelet coefficient data comprising inter-image correlation information;

storing said three dimensional wavelet coefficient data in said memory cache;

receiving an ordered request list for one or more three dimensional data blocks from said client, each three dimensional data block corresponding to a given region of interest;

checking if a requested three dimensional data block is present in said memory cache, and if not, computing three dimensional subband coefficient data blocks corresponding to said data block and storing said coefficient data in said memory cache; and

transmitting to said client three dimensional subband coefficient data blocks corresponding to said given region of interest.

27. (canceled)

28. (canceled)

29. (canceled)

30. (previously amended) The server according to claim 26, wherein said three dimensional wavelet transform comprises the steps of:

performing two dimensional subband transform decompositions in x-axis and y-axis directions on said image sequence to yield two-dimensionally transform-decomposed digital images; and

performing a one dimensional subband decomposition in a z-axis direction on a portion of said two-dimensionally transform-decomposed image sequence.

31. (previously amended) The system according to claim 6, wherein said three dimensional wavelet transform comprises the steps of:

performing two dimensional subband transform decompositions in x-axis and y-axis directions on said three dimensional image to yield a two-dimensionally transform-decomposed digital image; and

performing a one dimensional subband decomposition in a z-axis direction on a portion of said two-dimensionally transform-decomposed three dimensional image.

32. (previously amended) The system according to claim 6, further comprising the step of transmitting to said client computer data representing thumbnail resolution images.

33.   (previously amended) The system according to claim 6, wherein said ordered request list generated by said client computer specifies a quality threshold and said server computer comprises means for sending three dimensional subband coefficient data blocks corresponding to said quality threshold.

34.   (previously presented) The system according to claim 6, wherein said client computer comprises means for requesting fewer quality layers if an image is mapped in accordance with a luminance mapping function to a viewing device having fewer bits per pixel than that of said image.

35.   (previously amended) The method according to claim 16, further comprising the step of said server computer transmitting to said client computer data representing thumbnail resolution images.

36.   (previously amended) The method according to claim 16, wherein said ordered request list generated by said client computer specifies a quality threshold and said server computer sends three dimensional subband coefficient data blocks corresponding to said quality threshold.

37.   (previously amended) The method according to claim 16, wherein said server computer progressively transmits said three dimensional subband coefficient data blocks to said client computer using one of the three progressive modes: progressive by accuracy, progressive by resolution or progressive by spatial order.

38.   (previously presented) The method according to claim 16, wherein said client computer requesting fewer quality layers if an image is mapped in accordance with a luminance mapping function to a viewing device having fewer bits per pixel than that of the image.

39.   (previously amended) The server according to claim 26, wherein said processor further comprises means for transmitting to said client computer data representing thumbnail resolution images.

40.   (previously amended) The server according to claim 26, wherein said ordered request list received from the said client computer specifies a quality threshold and said processor comprises

means for transmitting three dimensional subband coefficient data blocks corresponding to said quality threshold in response thereto.

41.   (previously amended) The server according to claim 26, wherein said processor comprises means for progressively transmitting said three dimensional subband coefficient data blocks to said client computer using one of the following three progressive modes: progressive by accuracy, progressive by resolution or progressive by spatial order.

42.   (previously amended) The server according to claim 26, wherein said processor comprises means for receiving from said client computer a request for fewer quality layers if an image is mapped in accordance with a luminance mapping function to a viewing device having fewer bits per pixel than that of the image.

43.   (currently amended) A computer readable recording medium that stores a computer program for progressively streaming sequences of digital source images as a three dimensional image to a client over a communications network, said computer program including instructions, which when executed, cause a computer to execute:

> preprocessing said source image sequence through a three dimensional forward wavelet transform to yield three dimensional subband coefficient data comprising inter-image correlation information;
> storing said three dimensional subband coefficient data in a memory cache;
> receiving an ordered request list for one or more three dimensional data blocks from said client, each data block corresponding to a given region of interest;
> checking if a requested three dimensional data block is present in said memory cache, and if not, computing three dimensional subband coefficient data blocks corresponding to said data block and storing said coefficient data in said memory cache; and
> transmitting to the client three dimensional subband coefficient data blocks corresponding to said given region of interest.

44.   (previously amended) The computer readable recording medium according to claim 43, further comprising transmitting to said client data representing thumbnail resolution images.

45.   (previously amended) The computer readable recording medium according to claim 43, further comprising sending three dimensional subband coefficient data blocks corresponding to a quality threshold to said client in response to an ordered request list received therefrom.

46.   (previously amended) The computer readable recording medium according to claim 43, wherein transmitting comprises progressively transmitting said three dimensional subband coefficient data blocks to said client using one of the following three progressive modes: progressive by accuracy, progressive by resolution or progressive by spatial order.

47.   (previously amended) The computer readable recording medium according to claim 43, wherein said three dimensional data block comprises x, y, z and quality layer information.

48.   (previously amended) The computer readable recording medium according to claim 43, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.

49.   (previously presented) The system according to claim 6, wherein said three dimensional data block comprises x, y, z and quality layer information.

50.   (previously presented) The system according to claim 6, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.

51.   (previously presented) The method according to claim 16, wherein said three dimensional data block comprises x, y, z and quality layer information.

52.   (previously presented) The method according to claim 16, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.

53.   (previously presented) The server according to claim 26, wherein said three dimensional data block comprises x, y, z and quality layer information.

54.   (previously presented) The server according to claim 26, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.